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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,007	09/28/2001	Naruhiko Kudo	NIS-12689	4824

7609 7590 06/09/2003

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EXAMINER	
MCCLOUD, RENATA D	
ART UNIT	**PAPER NUMBER**
2837	

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/966,007	Applicant(s) KUDO ET AL.	
	Examiner Renata McCloud	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 19 March 2003, paper number 5, the following has occurred:

(a) A certified translation of priority document JP 2000/300303 has been submitted by the applicant.

(b) Claims 1-5 and 11 have been amended. Claims 6-10 have been cancelled. Claims 1-5 and 11 are now present for examination.

(c) The 35 USC 112 rejections of claims 1,2, 4, and 11 have been withdrawn by the examiner due to the changes made by the applicant.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kambe et al (U.S. Patent 6,211,635) in view of Chinomi et al (U.S. Patent 6,256,181).

Claim 1: Kambe et al teach a drive unit for a brushless fan motor including a stator with a plurality of excitation windings and a rotor with a plurality of rotor magnetic poles each constituted by a permanent magnet (e.g. Fig. 1), the unit having a position detector (e.g. Fig. 1, #2), a plurality of excitation switches connected in series to each of the excitation windings (e.g. Fig. 3, Fy and Fz), a power feed semiconductor switch between the excitation windings and power supply (e.g. Fig. 3, MCU), a power control circuit for outputting a control signal to control the on/off operation of the semiconductor switch (e.g. Fig. 1, #10), the power control circuit controlling the on/off operation based on a target rotational speed of the rotor (e.g. Column 1:66-2:10) and the power control circuit constructed so that after the rotational speed of the rotor is stabilized, the power feed semiconductor switch may have turn-off time set shorter when the rotational speed is slower in comparison than the target rotational speed and set longer when the actual rotational speed is faster than the target rotational speed, and set as it is when an actual rotational speed is equal to the target rotational speed (e.g. Col. 5:60-6:16 teaches controlling the braking by adjusting the off time).

Kambe et al do not teach a rotational speed detecting means, a drive circuit for outputting an on/off changeover signal for the excitation changing-over semiconductor switch depending on an output of the position detector.

Chinomi et al teach a rotational speed detector (e.g. Fig.1, #3; Column 2:22-26), a drive circuit for outputting an on/off changeover signal for the excitation changing-over semiconductor switch depending on an output of the position detector (e.g. Fig. 1, #2; Column 2:37-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Kambe et al to include the teachings of Chinomi et al. The advantage of this would be a fan motor driving system with improved stopping, starting, resetting, and voltage control, even when the fan is driven by an external force.

Claim 2 : Kambe et al and Chinomi et al teach the limitations of claim 1. Referring to claim 2, Kambe et al teach a hall device for detecting the magnetic flux of the plural permanent magnets is on the side of the rotor (e.g. Fig. 1, #2.), and the positional detector detecting the position of the rotor based on the output of the hall device (e.g. Fig. 1, #2). Chinomi et al teach the rotational speed detecting means detecting rotational speed of the rotor based on the output of the hall device (e.g. Abstract).

Claim 3: Kambe et al and Chinomi et al teach the limitations of claim 1. Referring to claim 3, Chinomi et al teach until the rotational speed of the rotor is stabilized, the turn-off and turn-on time is set to a predetermined value (e.g. Column 4:25-30) .

Claim 4: Kambe et al and Chinomi et al teach the limitations of claim 1. Referring to claim 4, Chinomi et al teach a power control circuit sets the target rotational speed to be slower than the maximum rotational speed and sets the turn-off time at zero so as to rotate the rotor at a maximum speed (e.g. Fig. 6).

Claim 5: Kambe et al and Chinomi et al teach the limitations of claim 1. Referring to claim 5, Chinomi et al teach the power feed semiconductor switch is turned off or an

alarm in given when the rotational speed of the rotor does not reach a predetermined rotational speed (e.g. Column 8:28-31).

Allowable Subject Matter

4. Claim 11 is allowed. The following is a statement of reasons for the indication of allowable subject matter: The prior at made of record fails to teach a method of controlling a plurality of fan motors rotating at a normal speed, wherein when one of the fan motors is stopped, the remaining fan motors are set to rotate at a maximum speed.

Response to Arguments

5. Applicant's arguments filed 19 March 2003 have been fully considered but they are not persuasive.

In response to applicant's arguments In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., speed control without the use of PWM control) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Hahn et al (U.S. Patent 6,452,349) and Seki et al (U.S. Patent 6,563,286).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.-Thurs and every other Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud
Examiner
Art Unit 2837

RDM
May 30, 2003

ROBERT E. NAPPI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800